SPECIAL AIRWORTHINESS INFORMATION BULLETIN

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Introduction
This Special Airworthiness Information Bulletin (SAIB) provides information on the inspection requirements for the **Schweizer Model 269C-1** Aft Mast Support Strut, P/N 269A2172-5.

Reference Documentation
The following references provide guidance regarding strut inspection:

- Schweizer Service Bulletin C1B-014 issued August 9, 2002
- Model 269C-1 Handbook of Maintenance Instructions (HMI), Appendix B revised September 2002

Background
Since August 1997, there have been three cases of Schweizer Model 269C-1 Aft Mast Support Strut, P/N 269A2172-5 (Support Strut) failures at very low time in service (TIS): 38.3, 142 and 36.6 hours. The Support Strut is not a life limited part. In July 2002, a similar strut failure occurred at 1609 hours TIS on an aircraft that had a previous in-flight engine failure and a tailboom replacement. A spare sale on January 22, 2003 has also been traced to a replacement for a cracked gusset (TIS not known). Although the failures occurred at the same location in a gusset that is used on all Schweizer models, the failures have been limited to the 269C-1 models. Failure of the Support Strut may lead to loss of control of the helicopter, and subsequently cause property damage, injury or death.

There are two strut configurations with the same part number (269A2172-5): the original configuration uses an end gusset that has two thicknesses where the thinner portion is welded to the strut tube; the modified configuration, which was initiated in December 2001, uses an end gusset with a single thickness that is equal to the thickness of the thicker portion of the original gusset. The critical section is on the forward gusset (Drawing No. 269A2204) of the original configuration at the thinner section between the toe of the fillet weld and the change-in-thickness fillet radius (Fig. 1). Both gusset configurations are approved for flight. The new version was introduced as a product improvement, and was phased in during depletion of the old configuration.

The exact cause of the failures has not been determined, but metallurgical examination of the failed parts has ruled out defective welds.

Schweizer Service Bulletin C1B-014, which was issued on August 9, 2002, called for a one-time10X magnifying glass inspection of the critical gusset for all 269C-1 models. At the same time, Appendix B of the HMI was revised to include a thorough 100-hour inspection of all of the gussets for all models.

Recommendation
The 100-hour HMI inspection procedures for the strut gussets, as currently required, should be carried out with great care.

Whenever the Aft Mast Support Strut is installed on the vehicle, extreme care should be exercised to preclude bending of the gusset at the critical section. Such bending could occur when the forward connection (mast) is made first, followed by the aft connection (boom).

Strut installers who encounter difficulty installing the strut when following the HMI procedures, should contact Schweizer in order to preclude installation damage.

After a hard landing, main rotor strike, tail rotor strike or tailboom strike, the 100-hour HMI Aft Mast Support Strut inspection should be included in the Support Strut inspection.

For Further Information Contact
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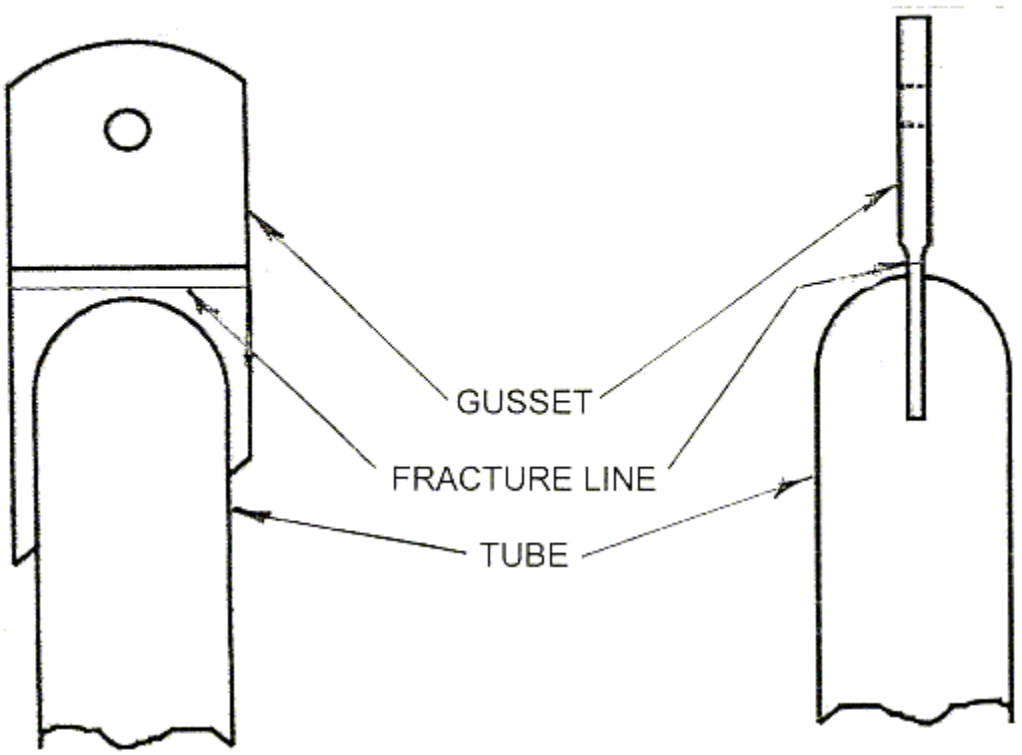

Figure 1. Schematic drawing of the forward end of Schweizer Model 269C-1 Aft Mast Support Strut showing the original two-step gusset and fracture line.